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[0027] Figures 3A-G illustrate sAß-induced GRK5 translocation from membrane to cytosol in microglia;

[0028] Figures 4A-B illustrate inhibition of GRK-PAR binding by sAß-pretreatment in microglial cells;

[0029] Figures 5A-C illustrate that pretreatment with sAß resulted in prolonged thrombin signaling in microglial cells; and

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[0030] Figures 6A-B illustrate sAß-induced microglial hyper-reactivity to GPCR activators.

DETAILED DESCRIPTION OF THE INVENTION

[0031] The present invention is based, at least in part, on the discovery that dysfunction of G-protein coupled receptor kinases (GRKs) particularly GRK2 and GRK5, occurs in brains with Alzheimer's disease.

[0032] AD is a neurodegenerative disorder, with prominent pathological features involving the abnormal accumulation of a small peptide, termed ß-amyloid (Aß). However, the pathogenetic mechanisms associated with the abnormal Aß accumulation remain unclear, which has significantly hampered understanding of the prognosis, prophylaxis and